

AD-A023 161

SPECIAL DATA COLLECTION SYSTEM (SDCS) EVENT REPORT,
NTS EVENT 'DINING CAR', 05 APRIL 1975

J. R. Woolson, et al

Teledyne Geotech

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September 1975

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SPECIAL DATA COLLECTION SYSTEM EVENT REPORT
NTS Event "DINING CAR", 05 April 1975

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September 1975

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SDCS Event Report No. 19

NTS Event "DINING CAR", 05 April 1975

This event report contains seismic data from the Special Data Collection System (SDCS), and other sources for the above event. Published epicenter information from seismic observations is:

	Origin Time	Latitude	Longitude	m_b	M_s
NORSAR	19:44:59	36 N	116 W	4.6	N/A
LASA	19:44:35	34.4N	115.9W	4.2	N/A
PDE	19:45:00	37.2N	116.2W	4.8	N/A
Hagfors Array, Sweden	19:44:51	36 N	118 W	5.0	N/A

Using SDCS stations, LASA and NORSAR, the epicenter location becomes

SDCS & Arrays	19:45:02	37.3N	116.3W	4.9	3.5
---------------	----------	-------	--------	-----	-----

FN-WV was not operational for this event.

Short-period signals associated with this event were recorded at all operational SDCS stations, and LASA and NORSAR. The short-period vertical channel gain at CPSO is unknown. The number of instruments contributing to the summation during calibrations was not recorded.

Analysis of the SDCS, LASA and ALFA long-period data failed to produce recognizable signals associated with this event.

Scaling factors on plots are millimicrons at 1 Hz (not corrected for instrument response) with the exception of LASA and NORSAR short-period plots. LASA SP scaling factors are millimicrons per inch. Scaling factors are not reported for NORSAR short-period.

STATION DESCRIPTION

SITE CODE	LOCATION	SITE COORDINATES			ELEVATION METERS	INSTRUMENTATION	
		DEG	MIN	SECS		SHORT-PERIOD	LONG-PERIOD
ALPA	Alaska	65	14	00.0 N 147 44 36.0 W	626	None	31300
CPSO	McMinnville, Tennessee	35	35	41.4 N 085 34 13.5 W	574	6480 V 7515 H	SL210 V SL220 H
FN-WV	Franklin, West Virginia	38	32	58.0 N 079 30 47.0 W	910	KS36000	KS36000
LASA	Billings, Montana	46	41	19.0 N 106 13 20.0 W	744	HS10	7505A V 8700C H
HN-ME	Houlton, Maine	46	09	43.0 N 067 59 09.0 W	213	18300	SL210 V SL220 H
NORSAR	Kjeller,	60	49	25.4 N 010 49 56.5 E	379	HS10	7505A V 8700C H
RK-ON	Red Lake, Ontario	50	50	20.0 N 093 40 20.0 W	366	18300	SL210 V SL220 H
WH2YK	White Horse, Yukon	60	41	41.0 N 134 58 02.0 W	853	18300	SL210 V SL220 H

Notes:

Details of the program used to obtain beamed vertical, radial and transverse long-period data at LASA, ALPA, and NORSAR are in the process of being reviewed. Vertical beams are probably valid, horizontal beams at the LASA and NORSAR are questionable. Horizontal beams at ALPA are probably invalid.

HYPOCENTER DETERMINATION

INPUT FOR EVENT 5 APR 75
19:45:00.0 37.000N 116.000W 0KM.

STA.	ARRIVAL	RESIDUALS		DIST.	AZ.
		CALC	REST		
LAO	19 47 52.8	-0.2	-0.1	12.0	35.4
RK-ON	19 49 46.5	0.2	0.1	21.0	42.8
CPO	19 50 23.7	-0.1	0.1	24.7	84.7
WH2YK	19 50 37.8	0.2	0.3	25.2	339.1
HN-ME	19 52 09.2	0.3	0.2	35.6	60.5
NAO	19 56 32.5	-0.4	-0.6	73.1	24.1

67 HERPIN TRAVEL TIME TABLES

ORIGIN	LAT.	LONG.	DEPTH (KM)	SDV	IT	STA
19:45:05.1	37.387N	116.219W	18. CALC	0.3	3	6
19:45:02.0	37.318N	116.269W	0. REST	0.3	3	6

CALC
1 . 1
0 . 0
0 0.3 1
0
0 0.0 0
0 . 0
0 . 0

REST
1 . 1
0 . 0
0 0.3 1
0
0 0.0 0
0 . 0
0 . 0

CHI2 COVERAGE ELLIPSE; 95 PER CENT CONF..LEVEL, SDV= 1.74
MAJOR 65.8KM. MINOR 42.3KM. AZ= 24 AREA= 8742 SQ.KM. REST

DATA SUMMARY

INPUT FOR EVENT 5 APR 75
19:45:00.0 37.000N 116.000W OKM.

STA.	PHASE	ARRIVAL		INST	PER	A/T	MAGNITUDE		DIR	DIST
		TIME					MB	MS		
LAC	M	EP	19 47 52.8	AB	1.0	16.	5.01			12.0
RF-ON		EP	19 49 46.5	SPZ	0.9	424.	5.43			21.0
CPO		EP	19 50 23.7	SPZ	0.9	??				
WH2YK		EP	19 50 37.8	SPZ	0.9	14.	4.27			26.2
HN-ME		EP	19 52 09.2	SPZ	1.0	72.	5.10			26.6
NAO		EP	19 56 32.5	AB	1.0	12.	4.67			73.1
NAO		LR	20 32 11.0	LAB	20.0	3.		3.46		73.1

ORIGIN	LAT.	LONG.	DEPTH (KM)	MAG	SDV	STA	LPMAG	LPSDV	LPSTA
19:45:00.1	37.387N	116.219W	18. CALC	4.85	0.53	4	3.46*****		1
19:45:02.0	37.318N	116.269W	0. REST	4.87	0.51	4	3.46*****		1

Short-period magnitudes (m_b) used in averaging are restricted to those recorded at distances between 20 and 110 degrees from the epicenter.

Average long-period magnitude (M_s) is based on Rayleigh wave observations in the period range of 17 to 23 seconds per cycle.

RK-JN 05 APR 75

19:49:48.5



10 SEC

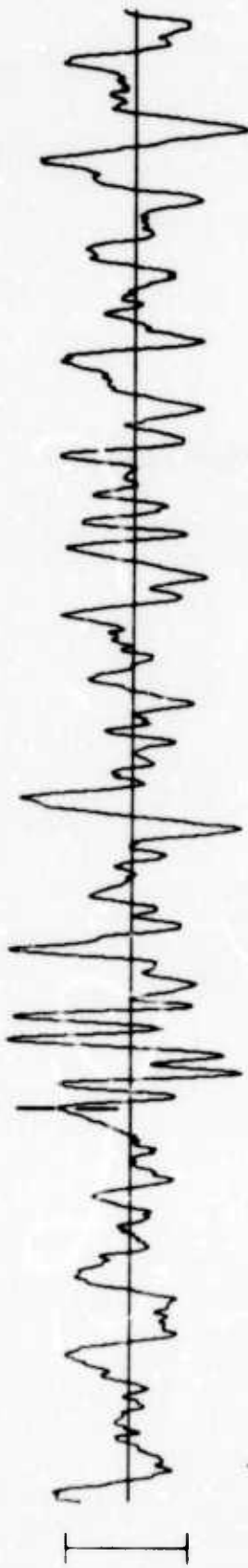
19:49:50

6.

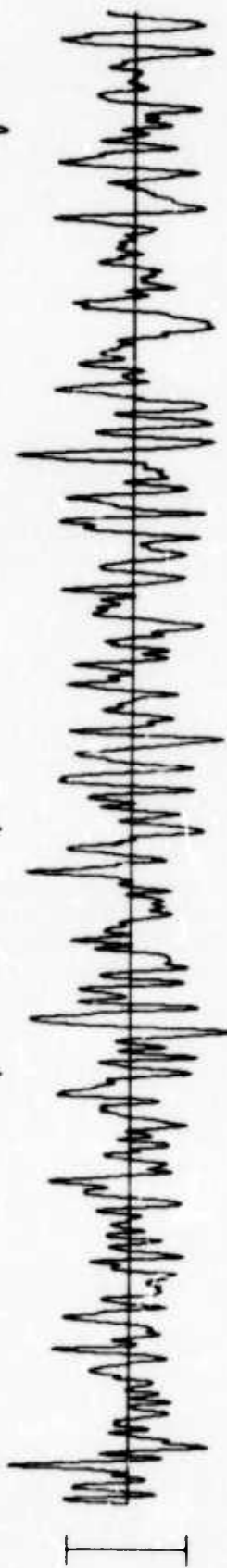
CPSO 05 APR 75

19:50:23.7

SPZ
UNKNOWN



SPR
229.19 MU



SPT
300.66 MU



TIME



19:50:10

10 SEC

• number of instruments in summation unknown

WH2YK 05 APR 75

19:50:37.0

SPZ
9.67 MU



SPR
6.77 MU



SPT
6.11 MU



TIME

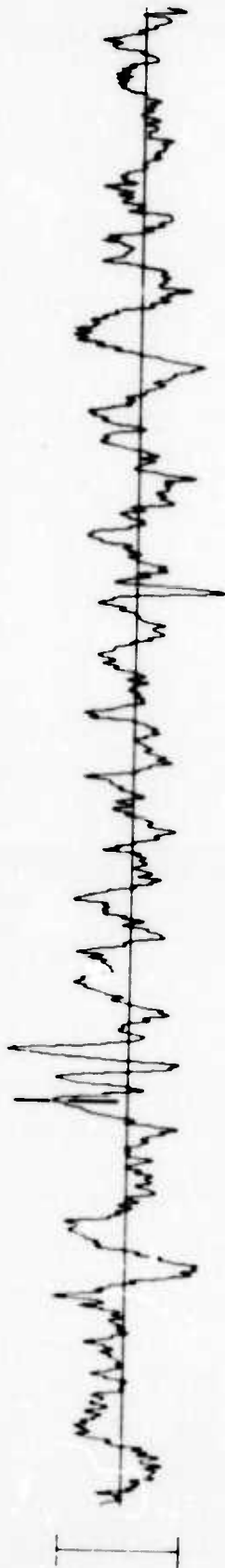


10 SEC

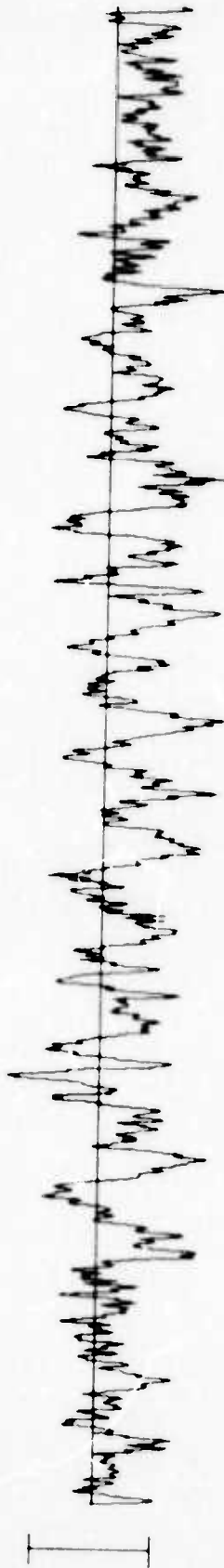
19:50:50

HN-VE 05 APR 75

19:52:09.2

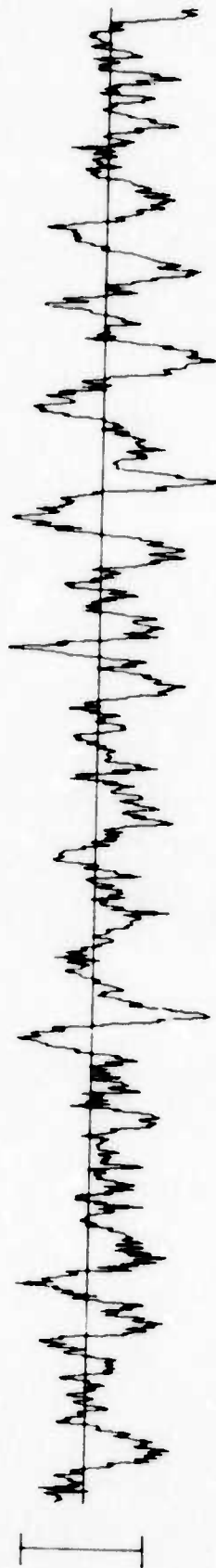


SPZ
51.33 MU



SPR
29.36 MU

9.



SPT
36.0 MU



TIME

19:52:10



10 SEC



LASA (INDIVIDUAL SHORT-PERIOD INSTRUMENTS) 5 APR 75

A0-10



D3-10



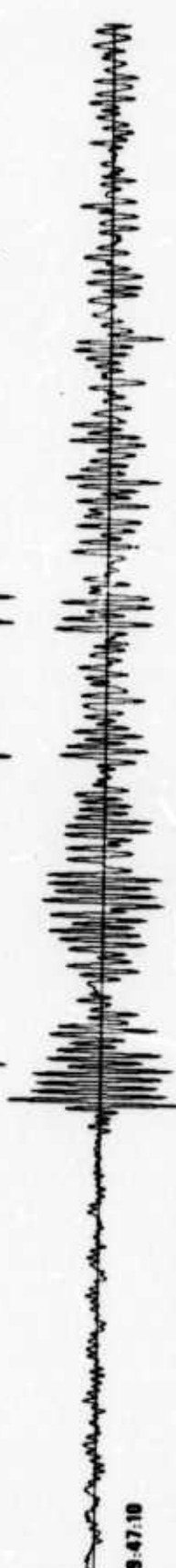
D4-10



D1-10



D2-10



10 SEC

(NO AMPLITUDE DETERMINATIONS MADE DUE TO UNRESOLVED SCALING PROBLEMS)

1 5 APR 1975

LASA

2 19 44 38 34.4N 115.9W 33C D 3.9 43 SOUTHERN CALIFORNIA
3 19 47 55.5 LAO P 4.1 1.1 8.4 14.2 214.6

EPX 95726

BP-B 0.6-2.0 HZ

ABN 8.5

19:47:45.5

AB 20

FAB 21

PAB1 25

PAB2 36

PAB3 28

PAB4 28

10 SEC

//.

NORSAR EVENT FILE

1975 APR 5

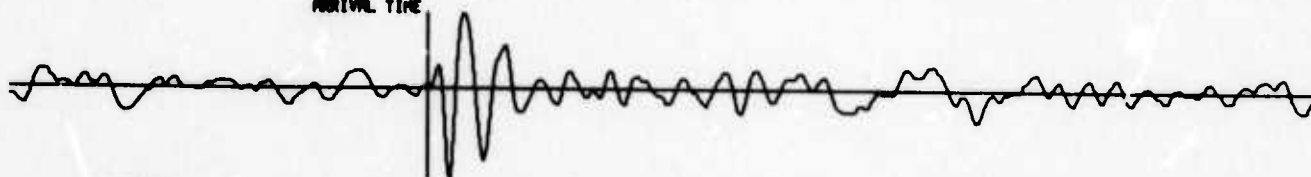
EPX NO. 13520 ARR. 19.56.32.3 36.1N 116.4W 4.5MB 33KM

DIST = 74.3 AZI = 317.9 AMP = 6.6 PER = 1.2

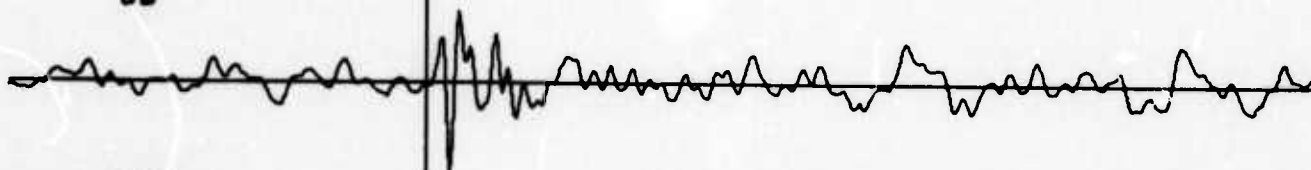
— = 5 SECONDS

AB

ARRIVAL TIME



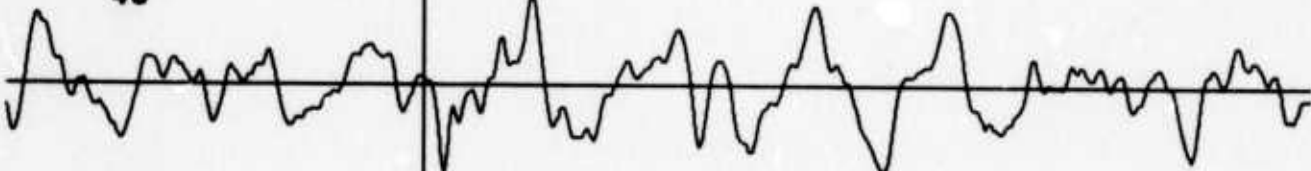
SAB
3B



SAB
1C



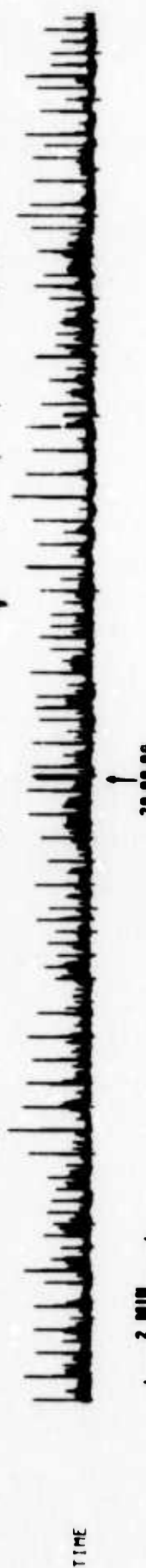
SAB
4C



SAB
13C

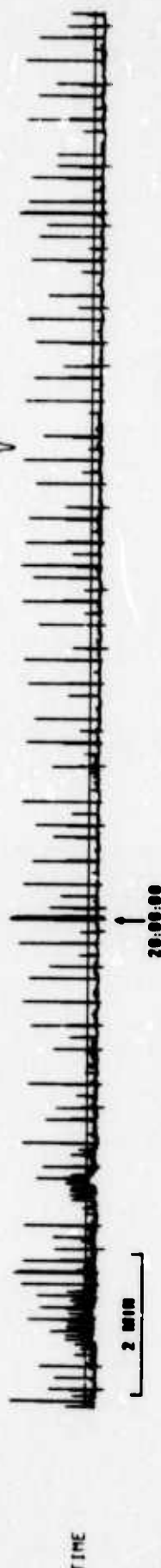


RK-JN 05 APR 75

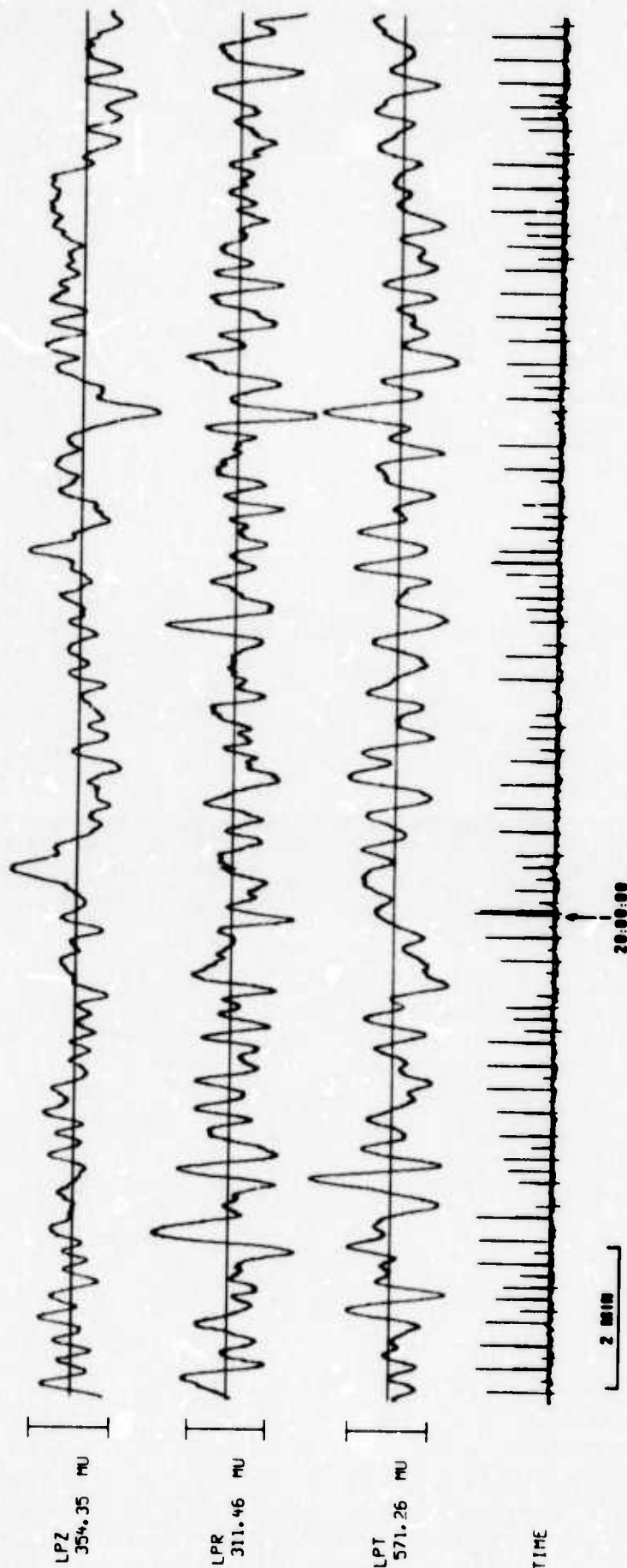


13.

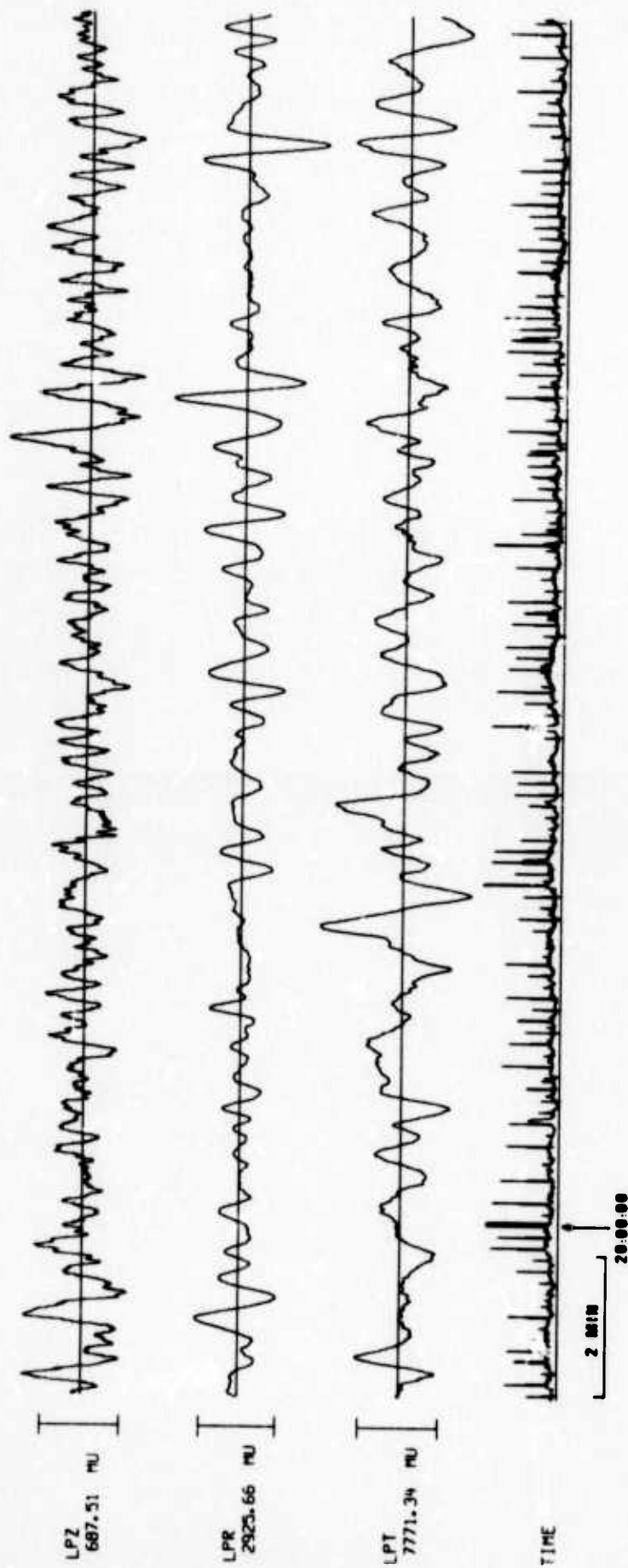
CPSO 05 APR 75



WH2YK 05 APR 75



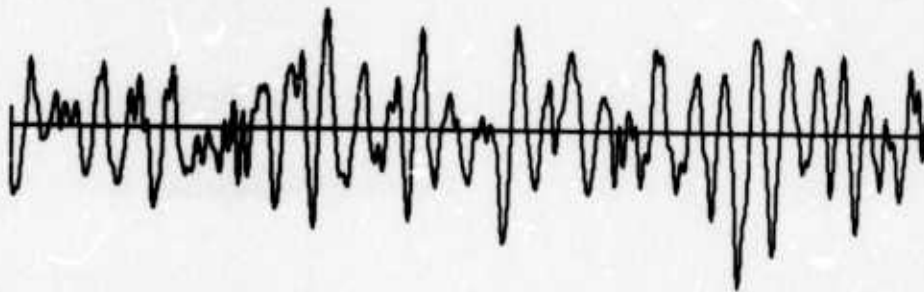
HN-ME 05 APR 75



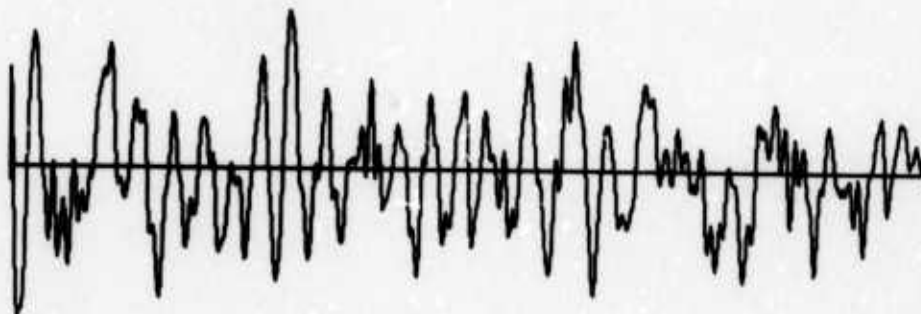
16.

LASA C4 SUBARRAY 5 APR 75

LPZ



LPN



LPE



19:47:00

2 MIN

(NO AMPLITUDE DETERMINATIONS MADE DUE TO UNRESOLVED SCALING PROBLEMS)

LASA LONG-PERIOD BEAMS 05 APR 75

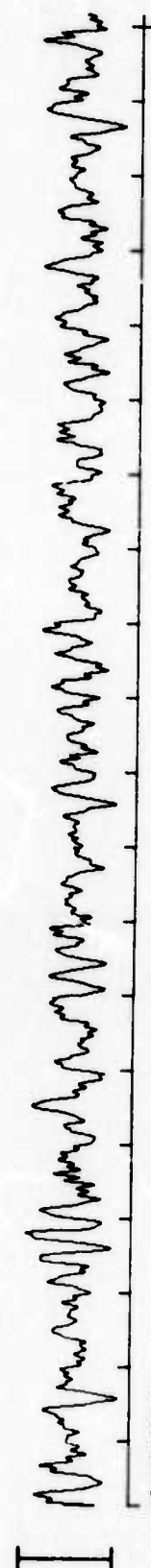
LP VERTICAL
180.22 MP



LP RADIAL
183.64 MP



LP TRANSVERSE
163.75 MP



19:40:08.0

1 MIN

NORSAR LONG-PERIOD BEAMS 05 APR 75

20:32:11
↓

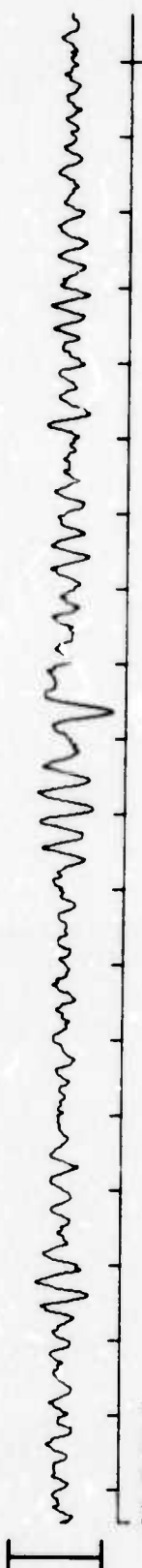
LP VERTICAL
71.65 MHz



LP RADIAL
66.06 MHz



LP TRANSVERSE
101.13 MHz



20:17:34.0

1 MIN

19.

ALPHA LONG-PERIOD BEAMS 05 APR 75

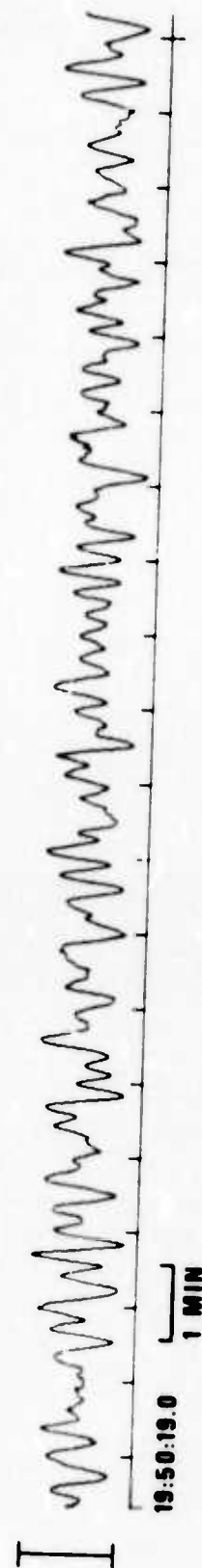
LP VERTICAL
73.19 MP



LP RADIAL
88.65 MP



LP TRANSVERSE
84.83 MP



20.